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ORIGINAL ARTICLES:

Australia: Material Culture. **Tindale.**

The Hand Axe Used in the Western Desert of Australia. *By Norman B. Tindale, B.Sc., Ethnologist, South Australian Museum.*

During the course of the various expeditions of the Board for Anthropological Research at the University of Adelaide, first hand observations have been made on the use of stone implements among the natives of the Western Desert and every opportunity has been taken of recording the first hand observations of their uses of stone by means of cinematograph films, still photographs and notes. Many of the film observations have already been published in the library of expedition film records (now numbering about seventy reels).

During the 1935 expedition to the Warburton Range in Western Australia, interesting observations were made on the Ngadadjara use of large chopping implements fashioned from roughly trimmed cores by removing a few secondary flakes from one face. An unfortunate accident caused the spoiling of the film record and renders particularly desirable a descriptive account of the use of this form of hand-chopper. They are used in the felling of trees, in the opening up of hollows in logs in the search for opossums, etc., and in the cutting of roots encountered underground. The natives fashion these large hand-axes by trimming an edge on any large flat boulder of suitable texture and dimensions.

A hand-axe whose mode of use was studied in detail was made from a tabular block of felspar porphyry. In felling a red-gum sapling the hand-axe-user held the trimmed stone in his right hand and employing as a working edge the small section of the obtuse edge shown in the lower right-hand corner of Plate E, chopped away at the wood; he worked all round the trunk with a slightly downward cutting motion, nibbling his way

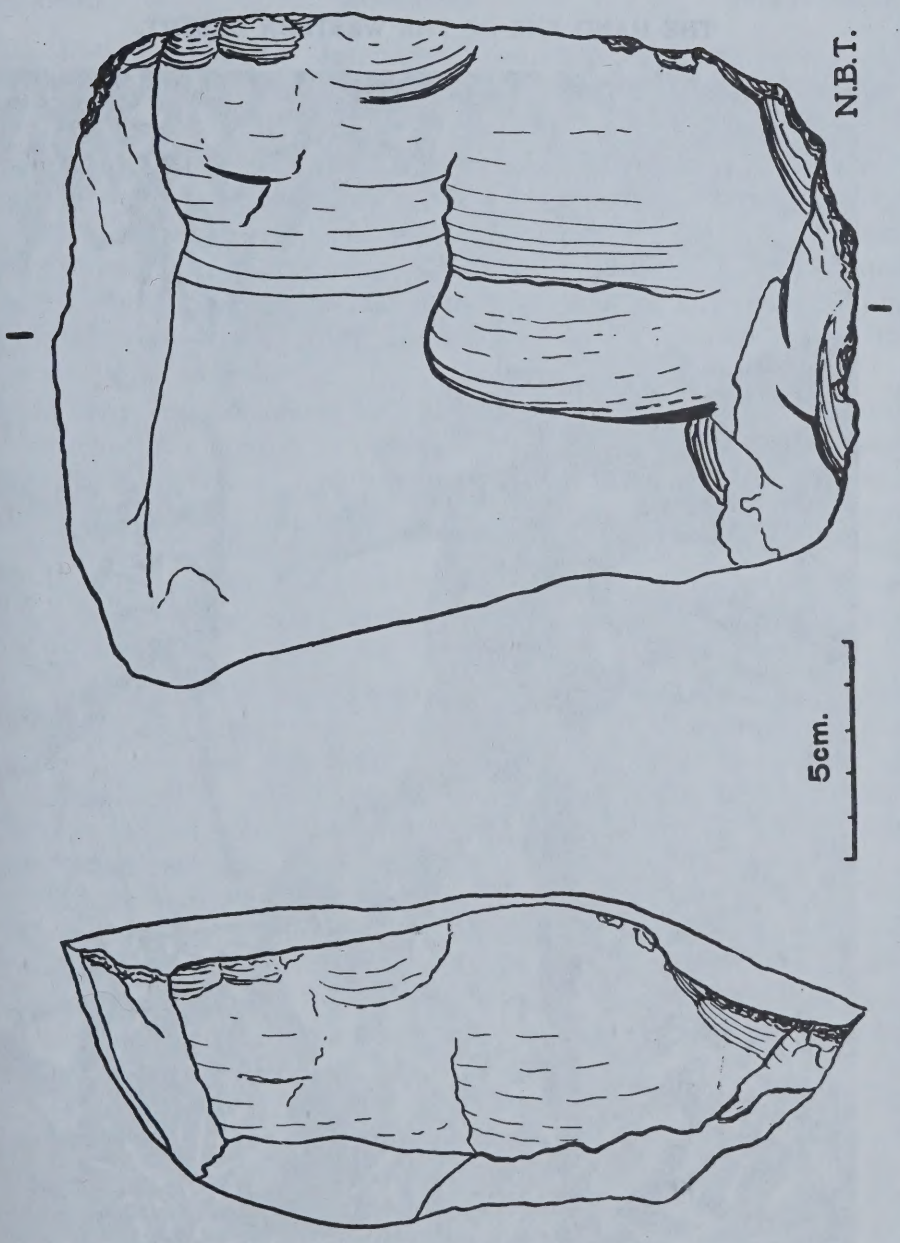
through the wood. The sapling was six inches in diameter (bark included) and the aborigine cut through it sufficiently to fell it in two minutes. The segment of the trunk was afterwards brought back to Adelaide and is preserved in the Museum collection as a sample of what is possibly one of the most elementary fashions ever practised of tree felling by stone-using methods. The only other method practised by the Ngadadjara and other desert tribes is the burning through of the base of the tree with a fire placed on the windward side.

Plate F shows the man engaged in the work. The broken block or boulder of felspar porphyry was selected from the dry bed of the creek near Warupuju Soak, and was fashioned on the spot. Care was taken in the selection of the block and the trimming of the edge to fashion an implement was done by holding it in both hands and by swinging it between the legs in such a fashion that a glancing blow was struck against a larger boulder lying in the creek bed. Heavy blows removed large flakes, lighter ones removed several finer ones. A method of rough trimming similar to this has been published in reel 2 of the Board for Anthropological Research films in demonstrating the making of edge-ground axe-blanks among the Iliaura tribe, at Ilappateila, in the MacDonald Downs area north-east of Alice Springs.

The stones chosen for use as hand-axes are given only meagre attention and trimming sufficient to provide a single cutting edge. In areas where the supply of stone is less abundant similar hand-axes may come to be used many times. By continued use and retrimming they tend to assume a characteristic shape and to become well characterized archæological hand-axes of types which have been found on many abandoned camp sites in southern Australia.

During the course of the recent Harvard-Adelaide Universities Anthropological Expedition further first-hand observations were made on the use of such stone hand-axes in the area east of Laverton, while descriptions obtained in 1933 in the Musgrave and Mann Ranges indicate that the Pitjandjara also use these implements.

Still larger and cruder boulders with a simple edge and often without any secondary trimming have been observed to be used on several occasions. There are several important examples of the use of such large stones to be seen in our film records. For example they are employed by women in the severing of roots and in the breaking up of extra hard ground during



THE HAND AXE OF THE WESTERN DESERT.

THE HAND AXE OF THE WESTERN DESERT.

their search for root foods. Interested research workers are referred to film No. 10, showing women of the Pintubi tribe at work near Mt. Liebig in central Australia.

The interest of these large and crudely worked hand-axes is redoubled because of the possible light they throw on various discoveries of large axe-like flaked stone implements in Australia, particularly the large so-called "sumatra" implements found on Kangaroo Island, in Tasmania and several of the other States (Tindale, 1931, 1937) and the large biface flints first recorded from Mt. Gambier district, but now known to extend to Western Australia as well.

There are many differences between the "sumatra" implements and these crude choppers, notably in the absence of the regular series of stepped secondary flakes on the working margin, but the similarity of the weights suggests that they were used for the same purpose as were those large and crude choppers. The larger ones (of an average weight of 44 oz.) were probably used in tree felling and in cutting roots, using both hands, whereas the lighter ones (average 20 oz.) would be used in one hand for lighter cutting and fashioning.

The Ngadadjara, the Nangatadjara and the Pitjandjara tribes of the Western Desert and other tribes south and west of them have never used hafted ground-edge axes, which are only known to the north and east of their country, and it would appear that their simple hand-chopping implement is the only one they know. In so far as their stone-axe using habits are concerned, they have remained in a far less advanced stage of culture than the natives of the Aranda group of tribes and others to the east. Their hand-axe is known as a (*'jali*), a word which is derived from an old root meaning stone; this term may be used as a general name for such crude trimmed stones to distinguish them from the archæological "sumatra" and kindred implements, and the figured example may be regarded as the type example.

References Cited.

Tindale, N. B. (1931): *Records of South Australian Museum*, Vol. 4, pp. 275-289.
Tindale, N. B. (1937): *Records of South Australian Museum*, Vol. 6, pp. 39-60.

4

N. B. Tindale.

Australia : Archæology. **McCarthy.**

Records of Rock Engravings in the Sydney District : I-VII. *By F. D. McCarthy, Dip.Anthr., Ethnologist, The Australian Museum, Sydney.**

Since its inception in 1928, the Anthropological Society of N. S. Wales has taken a great deal of interest in the rock engravings of the Sydney district. From time to time successful action has been taken to have various groups set aside as permanent reservations, and many excursions have been held to visit some of the most interesting sites.

Successive Councils of the Society have realized the urgent need for accurate records to be made and published of the numerous groups not included in W. D. Campbell's monograph (Ethnol. Series, No. III, Geol. Surv. N.S.W., 1899, now out of print). It was felt that this field work was partly the responsibility of the Society, and offered it a splendid opportunity of making a valuable contribution to our knowledge of aboriginal Australian art and culture. With this aim in mind, and as attendances at the excursions gradually dwindled, it was decided to form a small working party to record groups instead of wasting time and money merely visiting and talking about them.

The field is an extensive one. It was covered partly by Campbell who recorded groups in the area between Botany Bay and Somersby Falls more especially on the ridges and coastal headlands. There still remains to be recorded numerous groups within the area worked over by Campbell and also on Mangrove Mountain, National Park, and along the shores of the Hawkesbury River. The hundreds of groups yet to be recorded cannot all be done in week-ends, and it will be necessary to spend weeks at a time in some areas.

To date, twelve groups have been done and the results prepared for publication. Unfortunately, some of the charts are so large that they cannot be published at present because of the extensive area of the groups concerned. These will be kept until a sufficient series of them is available for publication in a special volume. In Campbell's monograph, groups too large for the page are broken up into sections, but no plan of their relationship is given, causing confusion and difficulty in their study. This arrangement was probably due to economy, and not the fault of the author.

* The author is solely responsible for the description and diagrams of the rock engravings whilst the recording is the joint effort of all members of the recording party given at the end of the description of each group.

Method

Because of the extensiveness of many of the groups of rock engravings, and of many of the individual figures, an accurate record of them may only be made by the employment of a technique which will enable the recorder to surmount many problems peculiar to the various groups. Time, or lack of it, is an especially important factor. Thus, in our work on the first group recorded, the whole rock surface was marked out in squares with chalk. These squares corresponded to the squares on the graph paper used to make the record. This is a method which is only serviceable when certain equipment is not available, and is one which involves a considerable waste of time. It was therefore found necessary to devise a more rapid and flexible technique that may be standardized, and the result was as follows :

A square frame was constructed of four pieces of batten (1 in. × 1 in. × 5 ft. 2 in.) screwed (or mortised) at the corners so that it could be taken to pieces for purposes of transport. On the inside of each batten screw-eyes were set, 1 ft. apart, to which strings were attached connecting opposite battens. As the frames are 5 ft. square (inside), the strings form 25 squares of 1 ft. dimension, and the frame covers an area of 25 sq. ft. The frames and strings are marked at 3 in. intervals.

In recording a group, a zero point is established on the rock surface and from it a datum line (either north to south or east to west) is marked in chalk at 1 ft. intervals. In its place, a 60 ft. tape may be used. The datum line must be fixed with compass or theodolite, and it should divide the group evenly. Large groups often require one or more secondary datum lines, some at right angles to the principal one. The frame, or frames, are then placed in position on the datum line and the figures recorded to a scale of 1 in. to 4 or 8 ft., that is, $\frac{1}{4}$ or $\frac{1}{8}$ in. to 2 or 1 ft. respectively. A group, if necessary, may be sectioned off so that several individuals may record parts of it on different sheets of paper, thus saving time, and the sections subsequently transcribed to a final and complete drawing.

A further improvement was made in the technique by substituting a rope net 10 ft. × 5 ft. and covering 50 sq. ft. for the wooden frames, which are awkward to carry. The use of several of these squared nets has resulted in a further saving of time in recording both large and small groups, and enables one recorder to do even a large group in one day.

It is desirable to make the final scale plan direct, without sectioning, but this procedure is not possible with some groups. Detailed notes should

be made of the nature and characteristics of the outlines of the figures, of their state of preservation, and of the site and its surroundings and also any other data worth recording.

The above method makes it possible to record the figures in their correct relationship to one another, and to the cardinal points of the compass, thus producing a complete and accurate scale plan of the whole group. If the latter is destroyed at any time, the record is preserved, and this is an important point when the groups are adjacent to a city expanding so rapidly as Sydney. The method is suitable for recording stone arrangements.

It should be pointed out that reproductions of individual figures, or of all the figures on a group not in their proper relationship, are a waste of time and money. Recording should not be attempted unless it is to be done in a competent manner.

Thorpe (MANKIND, Vol. 1, No. 2, 1931, pp. 40-41) described a method in which a rubbing on paper is made of individual figures. From the rubbing a drawing is made on asphalt or on the floor, which is photographed from above. This method cannot be applied successfully to the recording of large groups such as those of the Sydney district. The rubbing method is suitable for groups of the hammer-dressed type, found in the interior of Australia, in which the rock surfaces and figures are so small that very often a rubbing on paper may be made of a complete rock surface—a method employed with success by C. P. Mountford, who uses semi-transparent paper (*Rept. Austr. Assoc. Adv. Sci., Hobart*, 1928, p. 337).

DESCRIPTION OF THE GROUPS

Group I

Site. This group is situated in Duffy's Forest, near the junction of Telegraph and Larool Roads. The group is engraved on a large rock surface forming part of the northern bank of a creek, and about a quarter of a mile to the west of Larool Road. The rock surface is undulating and slopes to the south-west.

Description. The group depicts a hunting scene. The hunter, wearing a rayed forehead band, is shown beside a large and a small kangaroo, a doe and its young or a buck and its doe. His footsteps (it should be noted that one is reversed) lead down the middle of the rock to his shield, which he had apparently dropped. His two wives are engraved on the eastern side of the rock. Three large, natural rock pools extend almost east-west across

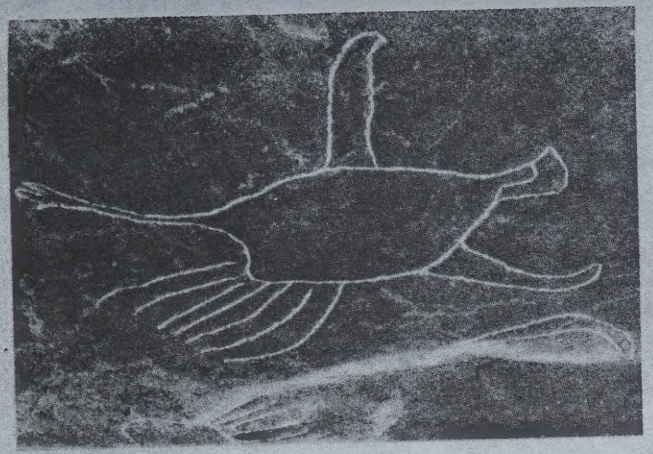


Fig. 1. Lyre-bird in group I.

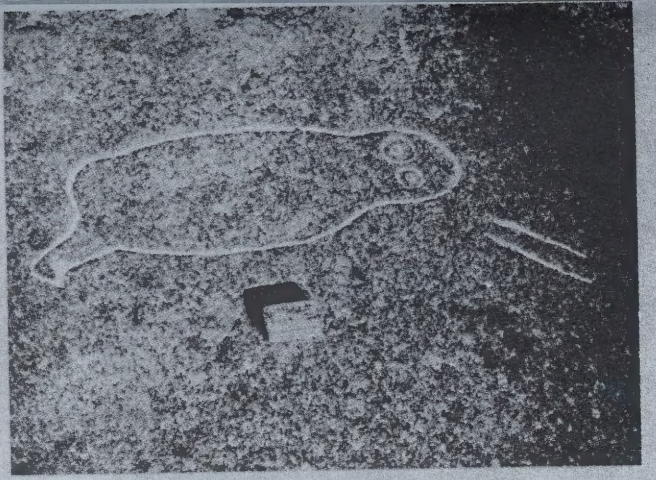


Fig. 2. Owl, with two parallel lines beside it, in group III.

Fig. 3. Gashing technique, male figure in group II.

Fig. 4. Smoothed grooves of culture-hero in group III.

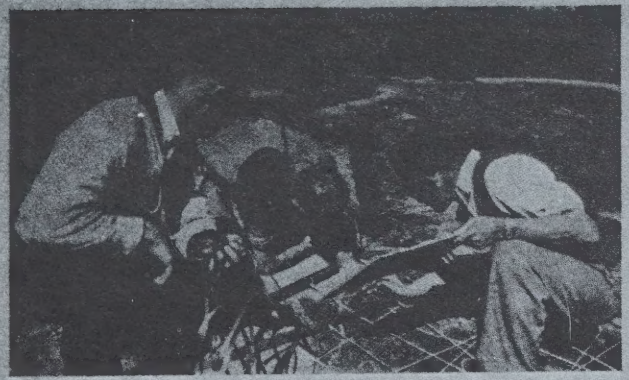
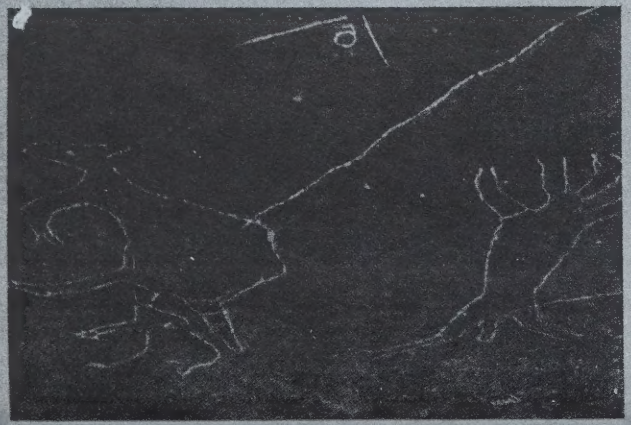
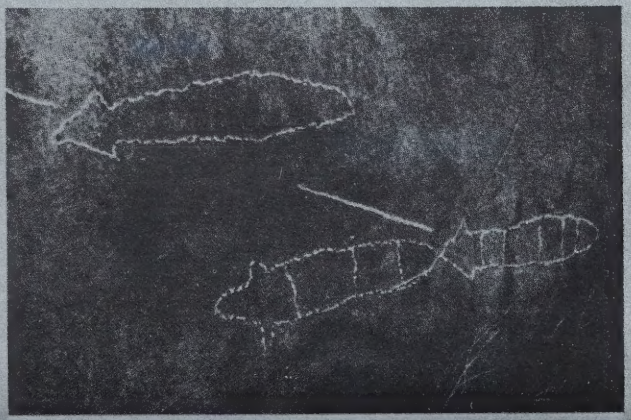


Fig. 5. Messrs. J. H. Cocks, E. H. Wright, and F. D. McCarthy recording. Note one frame in position over the figure, but a second frame was inadvertently left lying over it when the photograph was taken.

Fig. 6. A typical rock engraving site in the Sydney district. Topham, Kuring-gai Chase.





the eastern end of the rock, and beside them are some axe-sharpening grooves most of which have been destroyed by a vandal in the course of cutting canals between the rock pools.

Technique and State of Preservation. All of the outlines, except those of the shield, are " gashed " and not punctured, and the sharp undulating edges suggest the use of a hafted axe, constantly resharpened beside the pools. The outlines in the group are unusually sharply defined and show distinct facets, and it is not impossible that a steel axe was used. The shield is weathered and faint, due to the water from the pools flowing over it in rainy weather.

Interpretation. This group is a magnificent example of a pictorial composition and depicts an everyday scene of aboriginal life—the spearing of a kangaroo. It is fortunate that it is so well preserved.

Recorded by Messrs. F. L. S. Bell, W. H. P. Kinsela, F. D. McCarthy and G. W. Watkins.

Date : 10 August, 1940.

Group II

Site. This group is situated about 300 yards to the south of Group I, on the opposite side of the creek, and on an isolated rock surface about 100 yards up the slope from the creek bed. The rock surface is flat, but slopes to the east ; part of its lower edge has broken away, and there is a sharp drop of about 10 feet to the ground below. In all, there are 26 figures engraved quite close together on the comparatively small rock surface.

Description. The group comprises (left to right) : a wombat or porcupine, a wallaby, a flying phalanger, another wallaby ; an echidna or spiney ant-eater, a noose ; a third wallaby, a kangaroo, a fourth wallaby, a lyre-bird ; a boomerang, a pubic girdle (of slit marsupial skin) ; a shield, and ten bird tracks.

On each side of the wallaby (top middle) are two figures which may be elaborate bird tracks, or alternatively the one on the right may be an insect. A variant (extreme left) of these tracks is engraved on an isolated rock.

The lyre-bird figure is, perhaps, the most important feature of the group, and is the finest portrayal among the few known of this bird. The tracks which encircle the group are those of the lyre-bird, while the noose on a stick was employed by the aborigines to catch birds of this type.

The echidna is shown in a unique manner (compare Group IV, which shows the usual method) and the kangaroo is splendidly drawn. Most of the figures were done by a very fine artist, but one or two of the wallabies were done by an inferior carver. The insect (?) is most unusual.

Two natural, elongate-shaped pools are present on the rock. They are up to 18 ins. deep.

Technique and State of Preservation. The grooves are smoothed by grinding and are considerably weathered. They are from ½ in. to 1½ in. wide, and ¼ in. deep. They contrast strongly with those of the neighbouring group (No. I).

Interpretation. It is probable that the site is a sacred one of the lyre-bird totem clan, but whether it functioned in increase rites or represents a folk-lore legend, it is not possible to say. The large number of other creatures depicted probably figured in the story.

A fantastic description of these two groups is given in Wm. Robertson's "Cooee Talks," pp. 86-88.

Recorded by: Messrs. F. L. S. Bell, W. H. P. Kinsela, F. D. McCarthy and G. W. Watkins.

Date: 10 August, 1940.

Group III

Site. This group is situated on Crown land, on top of a ridge one mile to the east of Beckstein Post Office, Macdonald River Valley, and 1½ miles east of Mr. Sternbeck's farm. The rock surface is about one acre in extent, and the view on either side is of sandstone ridges and gorges.

Description. The group comprises (left to right): two wallabies, two emus courting, the foot-tracks of a culture hero; a kangaroo or wallaby with young, a culture hero, a young mammal (wallaby ?), a man and a set of emu eggs.

Technique and State of Preservation. The large culture hero and the representation of his footstep have outlines smoothed by grinding up to 2 in. wide and 1 in. deep. Most of the other figures have irregular gashed outlines, very clearly defined.

Interpretation. The group may be an increase site for the emu, as these birds are shown courting and a set of their eggs is included. On the other hand, the wallabies and the wallaby or kangaroo with its young and the pair of this marsupial's tracks, may connect it with the culture hero. A

third possibility is that the human figure may be the culture hero Daramulan, whose totem is the emu, and the site one at which he left spirits of kangaroos. Unfortunately, we will probably never know why the aborigines of this area depicted so many different animals in the one group, and it is not possible to discuss the matter in detail here.

Approximately half a mile to the south of the above group, on an isolated rock on the same ridge, is an engraving of an owl with two short parallel lines beside it. The figure is life-like and well done, and is unique among the engravings of birds. The groove is smooth and slightly weathered.

Recorded by F. D. McCarthy.

Date: May, 1940.

Group IV

Site. This group is situated a quarter of a mile due north of McCarr's Trig. Station, Kuring-gai Chase. The rock surface is long and narrow and runs north-west to south-east through a swampy slope at the rear of Coal and Candle Creek.

Description. The group comprises a large and varied assortment of figures as follows (left to right): a wallaby, 2 birds, 3 eels, a group of 5 circles, a wallaby, 11 axe sharpening grooves, a woman with a digging-stick, a death bird, a shield, 2 circles, fish (?), 2 circles, a set of 7 axe sharpening grooves, a shield, 2 fish, 2 men, an unidentifiable figure, 3 porcupines, 2 eels, a spear-thrower or garfish and 20 human footprints (the small ovals, one has toes). Note also the five circular indentations at the left.

Points of interest are: (1) three porcupines beside two men, one of the latter wearing a rayed forehead band; (2) the large number of circles, thought to represent camps; (3) the drawing of a bird with a twisted neck, probably a shag; (4) the woman holding a digging-stick; (5) the human footsteps (represented by ovals) running through the group, one of which points to another group of engravings on tessellated rocks 200 yards up the slope, on top of a rise, from which there is an extensive view.

Technique and State of Preservation. The outlines of the figures vary considerably. Those of the eels, which are perfect examples of the punctured outline, have some of the punctures conjoined, while others are up to ½ in. apart. One of the wallabies has a smooth shallow groove up to 1½ in. wide. Some of the footsteps, the circles, bird, the two men and the porcupines

have smoothed and weathered grooves, up to 1 in. wide, and those of the shield are up to 1½ in. wide. The woman and digging-stick, the footsteps, the large shield and the elongate figure have "gashed" but weathered grooves. The axe sharpening grooves suggest that this implement was used in the making of the carvings with gashed outlines.

Interpretation. No particular meaning may be attached to this group, although it appears to illustrate a myth. Porcupines, wallabies, shags and eels are abundant in this locality, and it is one in which a digging-stick could be used profitably in the swamp. It may represent a picture of a very good camping place, although it is unusual for fish (from Coal and Candle Creek nearby) not to be represented. Again, portions of groups of this type may have distinct meanings.

Recorded by F. L. S. Bell, Miss E. Bramell, J. H. Cocks, F. D. McCarthy and E. J. Wright.

Date: 31 August, 1940.

Group V

Site. This group is situated beside a creek flowing into the head of Glade's Bay, Tennyson, Parramatta River. It is the only one which bears engravings of a number of sloping rock surfaces at the site, which must have formed an excellent camping place for the aborigines. The figures are on two rocks, both of which are undulating and slope in line with the ground. This is the only group of engravings known along the Parramatta River.

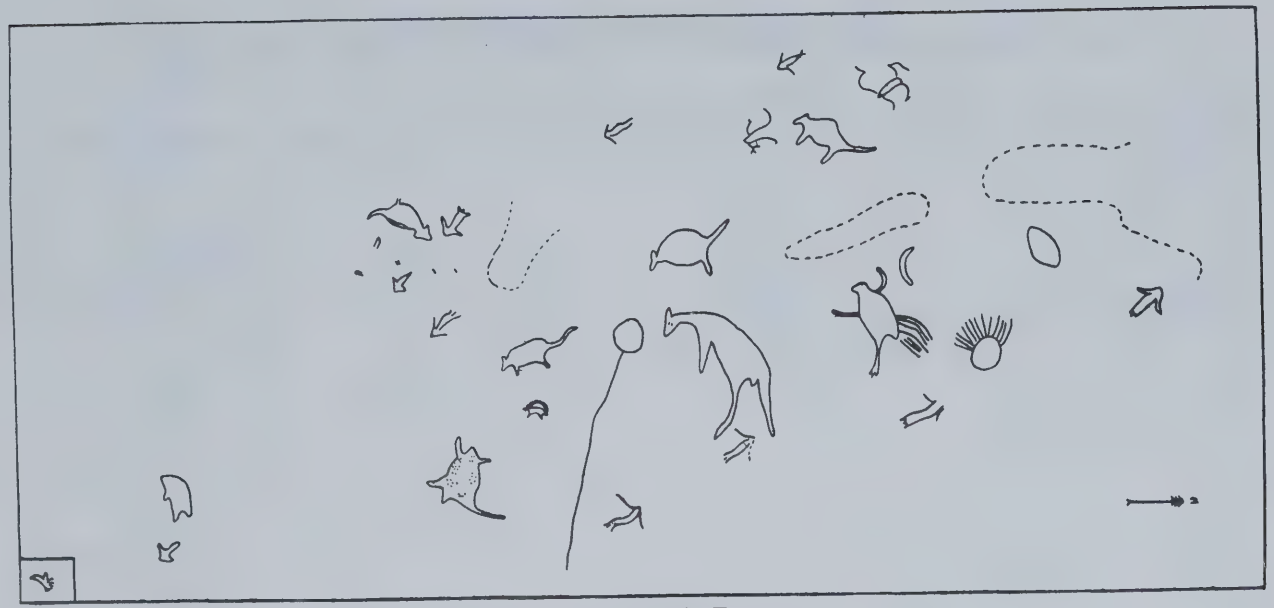
Description (left to right): two opossums, a man (object in hand unidentifiable), a large fish, a shield, a mammal (?), native water-rat, 2 wallabies, a boomerang, and a part of a fish (?).

Technique and State of Preservation. The outlines are smoothed grooves, some of which are very weathered and indistinct. Those of the two wallabies are very distinct, being ¾ in. wide and ½ in. deep. Vandals have altered some of the outlines.

Interpretation. The man may be holding a weapon or sacred object and he may be connected with the two opossums. The other figures may be a record of game frequenting the vicinity.

Recorded by Mr. and Mrs. F. D. McCarthy and Mr. and Mrs. W. G. Preston.

Date: 27 September, 1941.

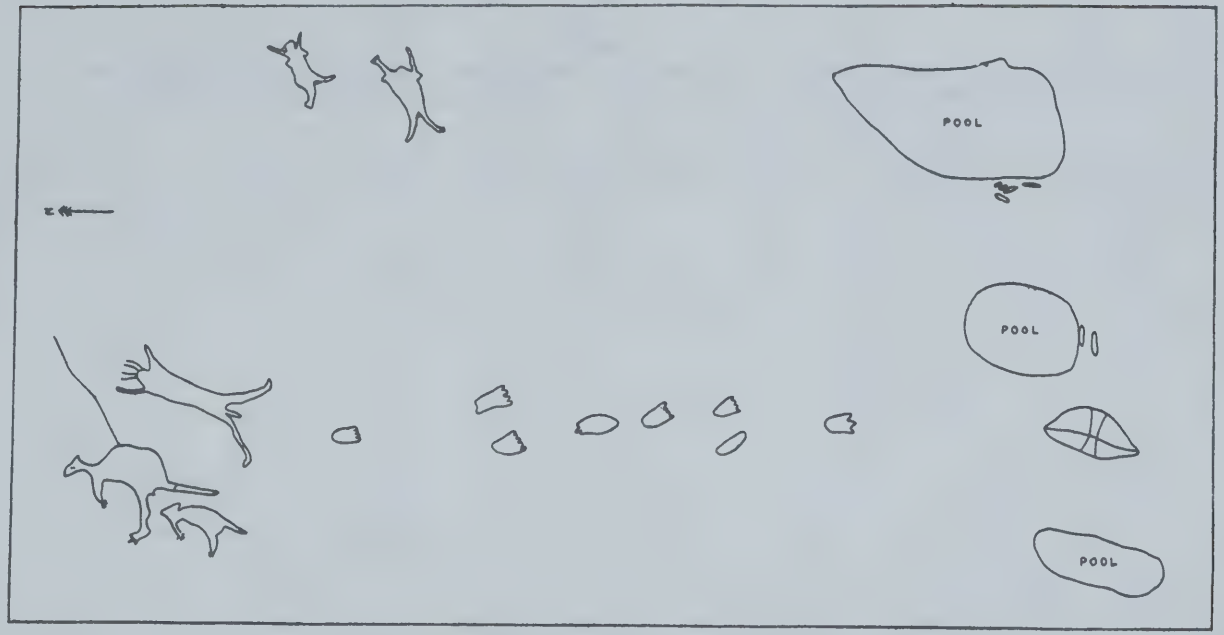


GROUP I. DUFFY'S FOREST.

Group depicting a Lyre-bird and other animals. Note the tracks of the Lyre-bird encircling the group and the noose used by the aborigines for catching birds of this type. The broken lines denote holes in the rock-surface.

Scale: 1 inch = 8 feet.

ROCK ENGRAVINGS OF SYDNEY DISTRICT.

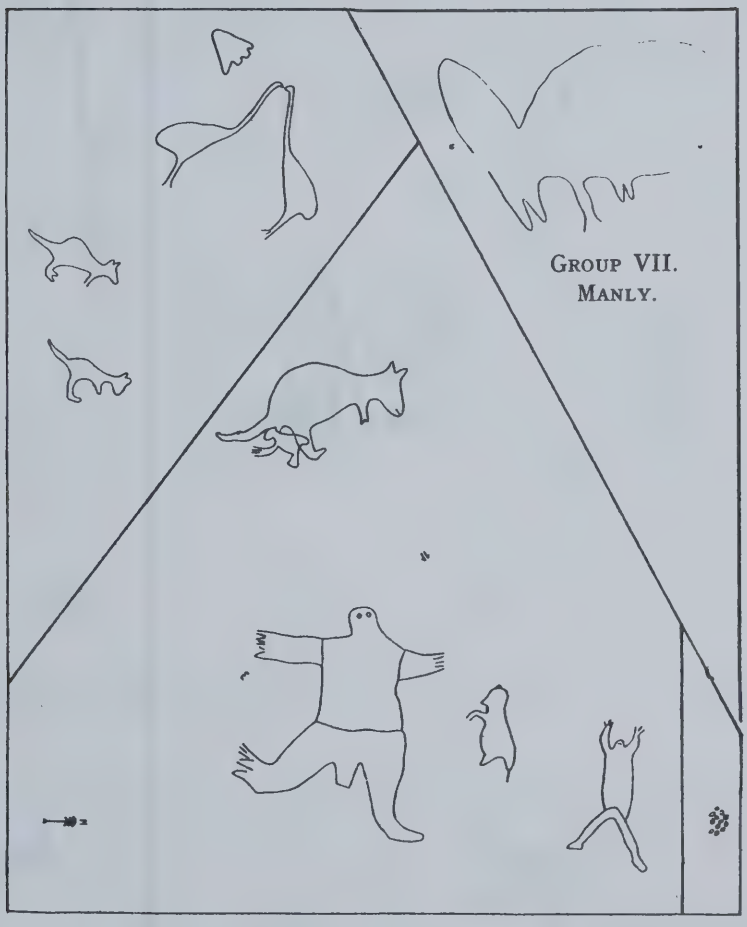


GROUP II. DUFFY'S FOREST.

Group depicting the spearing of a kangaroo. Note the hunter's footprints and his two wives. Axe-sharpening grooves are present beside the pools.

Scale: 1 inch = 8 feet.

ROCK ENGRAVINGS OF SYDNEY DISTRICT.

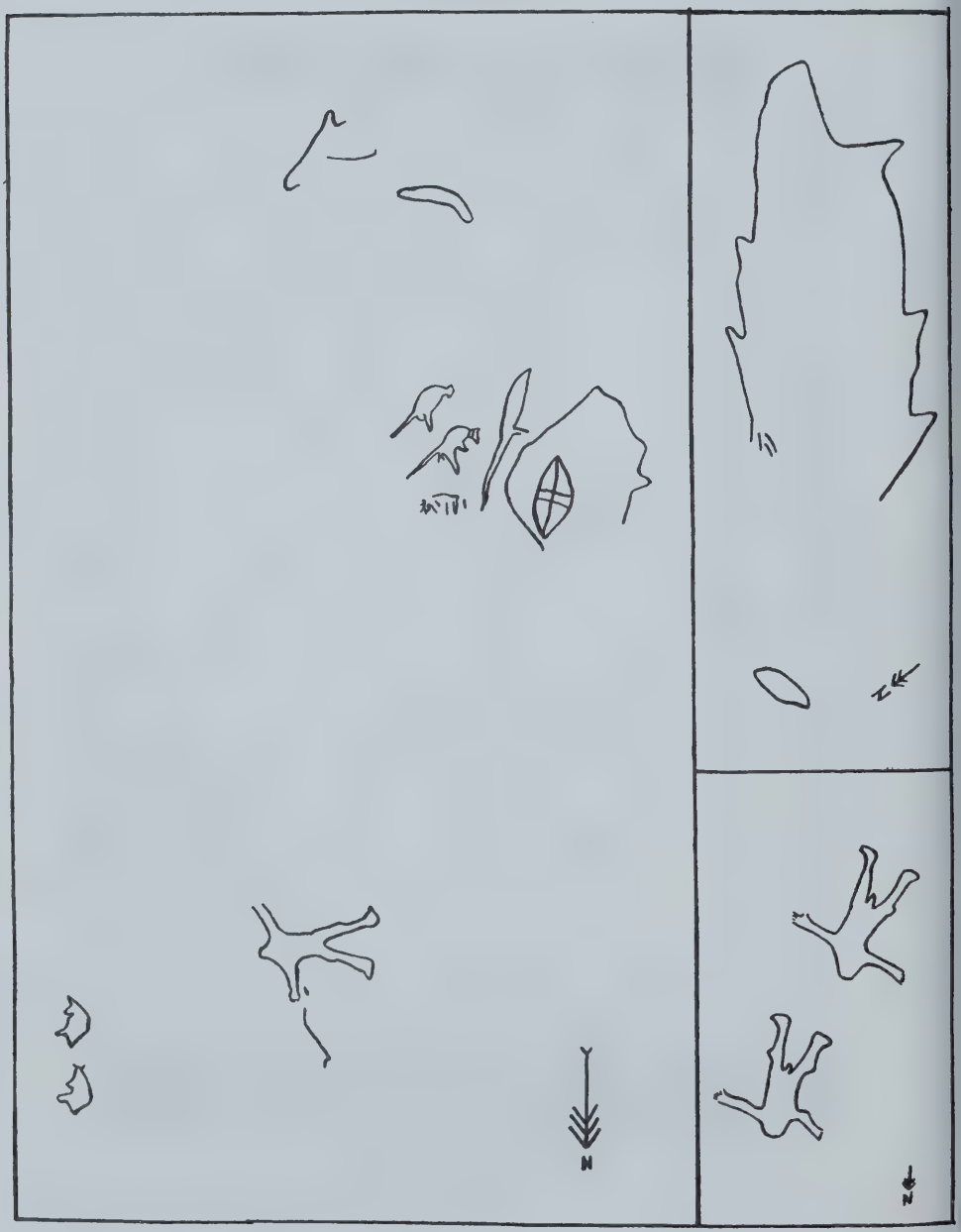


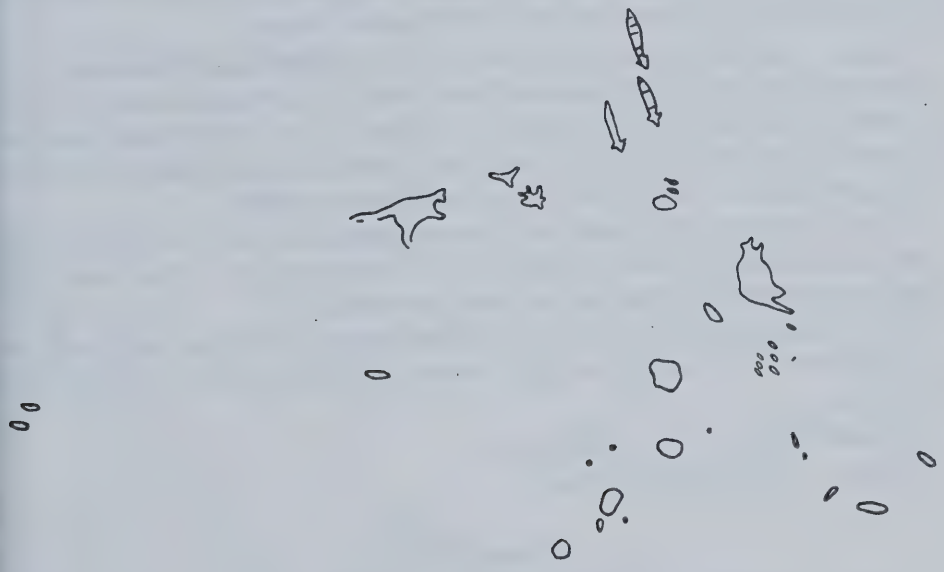
GROUP III. BECKSTEIN.

For the purpose of the block it has been necessary to divide the group into three sections. The series in the top left-hand corner is 15 feet further away from the kangaroo than shown, and the set of emu eggs in the lower right-hand corner is 75 feet from the man on the right.

Scale: 1 inch = 8 feet.

ROCK ENGRAVINGS OF SYDNEY DISTRICT.





Group VI

The southern shore of Middle Harbour is a blank on Campbell's map, although he recorded a number of groups along the adjacent northern shore of Port Jackson. It is of interest, therefore, to draw attention to three small sites in Northbridge, a rapidly expanding suburb in which the carvings will be built over within a few months' time.

Sites. (*a*) This group is situated on an undulating rock surface at the corner of Dalmeny and Tycannah Roads, with an extensive view of Middle Harbour. There is a whale alongside of a shield. The grooves are smoothed by grinding, but as the rock is a very soft sandstone and water runs across it in rainy weather, the grooves have weathered rapidly.

(*b*) This group is situated on a large prominent rock on the side of a ridge, now beside Dalmeny Road on the eastern side. Two men, with grooves smoothed by grinding are well preserved.

(*c*) This group is situated on the Northbridge golf course on a rock near the club-house. It comprises eight human footsteps, with toes in a north-south line.

Recorded by: F. D. McCarthy.

Date: 30 September, 1941.

Group VII

Site. The group is situated on property No. 8 Osborne Road, Manly, on a large rock surface on the ridge overlooking Manly Cove from its eastern end.

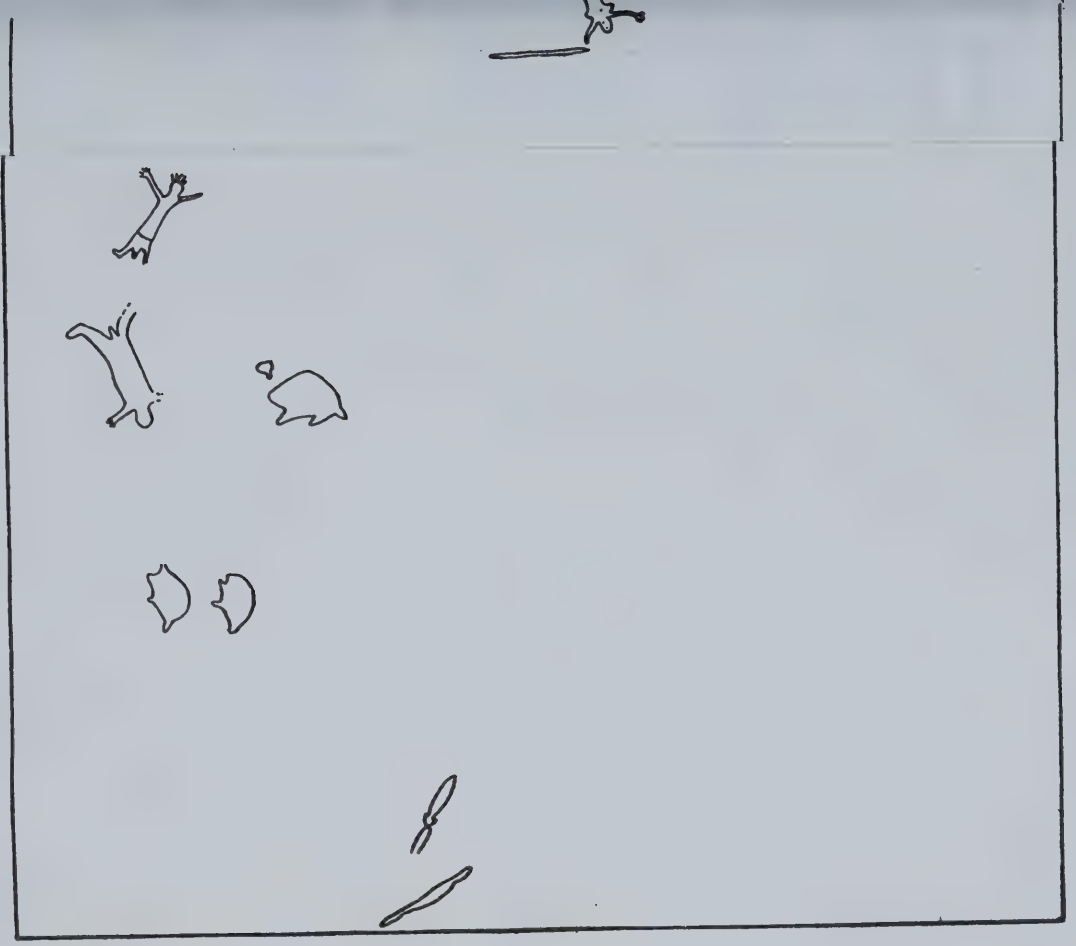
Description. A large marsupial figure. It is evidently part of a larger group, there being indications of other figures, one of which is a man. The rock surface extends under a house, and may bear other well-preserved figures.

Technique and State of Preservation. The grooves are smooth, wide and deep, and very distinct.

Recorded by: Miss Elsie Bramell and F. D. McCarthy.

Date: 1939.

F. D. McCarthy.



Ielanesia : Social Anthropology. **Bell.**

he Narrative in Tanga. *By F. L. S. Bell.*

Before transporting the reader to a low bamboo seat within the murky onfines of a Melanesian men's house, there to regale him with dramatic gend and comic tale, we shall consider briefly the nature of the narrative rm among these primitive Melanesian people who live on the coral-girt les of the Tanga Group.[1]

The first group of stories which we shall consider are very easily istinguished from other forms of the narrative in Tanga. They are widely nown. They can be told by anyone to anyone, except some of a " smoking- oom " type which are never told in the public hearing of women, although here is no objection to a man retailing them to his wife in the privacy of heir home. They are nearly always reserved for recitation during the eriod between the gathering of one harvest and the planting of another, hen the natives are most free to attend feasts and dances and group ommemoration ceremonies. Finally, they always have a humorous turn o them. They are amusing fiction and can best be described as *popular ales*.

Although they are publicly owned and publicly recited, there are only few men in Tanga with sufficient skill as raconteurs to be called on to tell uch stories. To see such a man in action is as good as a visit to an old-time evue. He takes on the character of each individual mentioned in the tory, changes his voice and mimics the behaviour of each character with ll the skill of a European comedian. At times I have seen an audience so oubled up with laughter that they have had to call upon the narrator to top. I have also seen a story-teller so imbued with the spirit of his story hat he himself has had to stop because of its infectious humour.

There is no standard text for each popular tale told in Tanga, the mportant thing is to mention all the relevant details in their correct order dding whatever embellishments in the way of added humour and gesticula- ion the narrator may desire. He is quickly corrected if he goes wrong n the telling but he is not required to follow a set pattern. I particularly nention this element of freedom in the telling of tales because I believe hat many people who gather such stories from the lips of natives very

[1] Tanga is a group of islands off the east coast of New Ireland, Mandated Territory of New Guinea. The author carried out field work in Tanga during 1933 on behalf of the Australian National Research Council.

often miss the whole point of the telling of tales. They concentrate on the actual words of each story and give the very often bored reader a halting word for word translation which is very useful to the linguistic expert but does not help the general reader towards an understanding of the cultural function of the popular tale.

The second group of stories with which I propose to deal are best distinguished by the use of the term *legend*. These stories are generally the property of an individual member or members of a particular clan. They are based on semi-historical data handed down within the clan and referring to deeds of daring-do by ancestral relatives. The incidents related in such legends are believed to have happened and in many cases evidence of their truth is substantiated by reference to certain peculiar features of the landscape. Very often they are dramatic compositions based on incidents which have occurred or are alleged to have occurred within the memory of the audience. They are handed down from father to son in contravention of the usual custom of passing such incorporeal property from mother's brother to sister's son. They are told at all times during the year and to members of either sex without restraint. They are much more important than the popular tales recited by expert performers. They are the lore of the people and their recital is not regarded as an entertainment. It is the privilege of the aged and middle-aged to recount these legends to the more youthful members of the clan. They invariably receive their undivided attention. They all relate to definite activities of native life such as warfare, dancing and trading expeditions, a thorough understanding of which is a necessary preliminary to an understanding of the legends themselves. They are not stereotyped presentations of the same story but several versions of one legend are often told by various members of a clan. Here again people who record native legends are wont to miss seeing the wood for the trees. They attempt to set down a word-perfect translation of a standard version and, in the majority of cases, no attempt is made to relate the legend to the real life of the people.

The third group of stories are so utterly different in character from either the popular tales or the legends that a description of them belongs rather to a separate article dealing with the magico-religious life of the Tanga.

These are the sacred tales or *myths* of the people told only on solemn occasions by an individual of importance in the community to another

individual or to a very limited audience. Almost every magical act is substantiated by a myth. The myth is the verbal aspect of the rite. It gives it authority just as our ancient charters give us authority for performing many of our religious and secular acts. Needless to say the myth is regarded by the native as a strictly accurate record of what occurred in that age which preceded the coming of the first Tangan and of those supernatural events which even to this day affect his life and death. The native does not believe that what is related as having occurred in mythological times may or could occur today but he does believe that his present way of life is profoundly affected by what occurred in those times. His whole social life, his every act is governed by the injunctions contained in the sacred myths of his people.

It is necessary at this stage to warn the reader against the common interpretation of the myth as a story in " explanation " of certain rites and customs. No native that I ever met had the slightest desire to explain his ritual acts and certainly never advanced a mythological " explanation " of such abstract ideas as Creation or Death or distinctions of race or animal species. It would never occur to a native that an "explanation" is required. To him, these things are facts which have a mythological sanction.

In the words of Dr. Malinowski, " these stories about the origin of rites and customs are never told in mere explanation of them. They never explain in any sense of the word; they always state a precedent which constitutes an ideal and a warrant for its continuance, and sometimes practical directions for the procedure."[2]

Popular Tales

There are no villages in Tanga. Each family group has its own small settlement cut out of the dense jungle and surrounded by a bamboo palisade. Within the area surrounded by the palisade there will be, at the most, three cooking houses occupied by the women folk and a large men's house, entry into which is forbidden to women. There will also be a separate fenced-off garden and a couple of store houses, in addition to a large dancing square. The head of each sub-clan has a somewhat larger settlement and a bigger men's house than the other members of the clan, in order that he may entertain both them and visiting members of other clans on a more lavish scale. The reader must imagine himself paying a visit to one of these

[2] Malinowski, B., " *Myth in Primitive Psychology*," p. 43.

settlements on the occasion, let us say, of the naming ceremony of the headman's sister's son. The rites have all been performed according to tradition and the little boy is being made much of in the women's cooking houses. Inside the long low leaf-covered men's house, two rows of men sit or recline on low bamboo benches facing each other. Smoke-blackened spears and clubs and masks and rolls of native tobacco hang from the rafters and near each carved house pole a mound of glowing embers helps to illuminate the almost pitch dark interior of the house. The headman leads you to a place of honour beside the most important men present and then calls upon Funmatbau to tell the company the tale of the Lizard and the Flying-fox.

Funmatbau lays down his pipe and straight away commences his tale :

A flying-fox, whilst hovering over the reef, noticed a fine school of fish just off the entrance to the channel. Not having any bait, he flew back to the bush in search of some spider-web to use as a lure. Meanwhile, a lizard came along and noticing the same school of fish as had caught the attention of the flying-fox, he obtained some bait from a small pool nearby and immediately began to fish that part of the reef. When the flying-fox came back and noticed the lizard fishing on that part of the reef where he had intended to fish, he became very angry. (At this stage of the story Funmatbau got to his feet and simulated anger.) He glided down silently behind the lizard and as the lizard flicked up his fishing pole preparatory to making a cast, the flying-fox quickly removed the bait and the hook flew baitless into the water. (Much laughter from the audience here.) After holding the line in the water for some time and not getting a bite, the lizard raised his fishing pole and had a look at the hook. On finding that there was no bait on it, he concluded that some small fish had eaten it off and he placed another piece of bait on his hook and flicked up his rod preparatory to making another cast. The flying-fox again quickly removed the bait. (During this part of the recital Funmatbau was acting the part of the fishing lizard and the thieving flying-fox to perfection and had his audience in roars of laughter.) The lizard, after waiting some time without a bite, again drew in his line and again noted that his bait was gone. He placed a third bait on the hook and the flying-fox again removed it. He pulled it in and placed a fourth bait on the hook. He flicked his rod up in the air, but this time the flying-fox failed to catch

the bait and the hook penetrated his " wing." The lizard then looked up and saw the flying-fox, who called out : " Hey there ! Your hook is caught in my wing. Don't pull ! " The lizard then realized what had been happening to his bait and he angrily asked him what he meant by behaving like that. He pulled him down and removed the hook from his wing, saying : " You have been taking the bait off my hook all this time. Now, why did you do this ? " The flying-fox replied : " I saw these fish first. They belong to me." The lizard then angrily said : " These fish belong to all men. They are not the property of one man."

The lizard then attacked the flying-fox and hurled it into the water and sat on top of it, trying to force it under. However, the " wings " of the flying-fox prevented it from sinking. (Here there was great laughter at Funmatbau's attempts to push the flying-fox under the water.) Eventually the flying-fox broke away from the lizard and flew towards the bush, with the lizard in hot pursuit. The flying-fox landed in a tree and hung under a branch. However, when the lizard climbed the tree the flying-fox was forced to move on to another tree. It finally landed on a tree with very large leaves and hung beneath one of these. The lizard saw it from the ground and climbed up after it, but when it reached the top it looked down and could not see the flying-fox, even though it crawled over the very leaf to which the flying-fox was clinging. The lizard then descended, looked up, caught sight of the flying-fox and again tried to find it. He failed to do so several times and at last the night fell and the flying-fox flew off to his own tree and the lizard had to go back to his hole in the tree. Both failed to satisfy their anger.

The tale is then ended with the usual three words *pil kasu red*, meaning Like lightning, it has come to a finish."

Funmatbau resumed his seat, took a drink from his green coconut and began to draw upon his pipe. There was no organized applause, but several men addressed complimentary remarks to him and one offered him a slice of pork. Tuangon, the brother of the headman, then launched out into the story of the Wily Rat and the Canoe Voyage.

Several birds and a rat wished to visit the mainland in a canoe. One morning they announced to all the men in the men's house that they would be leaving to-morrow morning. During the day the

flying-fox cooked his food for the journey, the fowl cooked his, the parrot cooked his, the pigeon cooked his (and here Tuangon gave a complete list of all the birds on Tanga. This is a feature of all such tales and woe betide the narrator who leaves out one bird.) The rat did not bother to cook any food. In the morning he and the flying-fox went to get water for the voyage and by the time they arrived back at the canoe house the canoe had been launched and all the other birds had their seats. The domestic fowl occupied the chief seat, that is he occupied the coxswain's seat. The flying-fox and the rat then scrambled in and sat near all the bundles of food which the various birds had brought to eat on the voyage. As they paddled away towards the mainland, the rat rooted about and by the time the coxswain announced that land was in sight he had eaten up all the food brought by the other animals. Of the food that the flying-fox brought, only the skin of the *paluk* (a melon) was left. The flying-fox feeling hungry, opened his basket and lo and behold, only peelings remained. He then exclaimed : " Hey ! Who has eaten all my *paluk*? " The other birds then said : " Ah ! Don't worry. We have plenty of food. Have some of ours." Each one then examined his basket and found it empty. The domestic fowl then suggested that as they had no food and the worst food was better than none at all, they should defæcate and eat the fæces. All did as suggested except the rat. The flying-fox, who suspected the rat, then asked the rat to defæcate. The rat did so and, of course, his perfidy was revealed. The flying-fox was so angry that he stamped on the side of the canoe and stove it in. Now all the voyagers could fly except the rat. The birds flew back to Tanga and the rat, sitting inside the *paluk* skin, floated on the surface of the water. From his precarious position he caught sight of a porpoise and said : " Hey, grandfather, do you swim up close to the beach ? " The porpoise said, " No," and explained that he never went beyond the reef. The rat then saw a large green fish and asked it the same question and received the same answer. He then saw a shark and went through the same procedure and got the same result. At last a turtle swam by and the rat asked him if he ever went up to the beach. The turtle said that he often went up to the beach and sometimes even wandered into the bush. The rat then hopped on to the back of the turtle and showed him a small tortoise-shell scraper

which he had with him. He explained that if it became too hot on the surface of the water, he would scrape the back of the turtle as a signal for him to swim under water and should he scrape the back of the turtle whilst they were under the water, then that would be a signal for him to rise and allow the rat to breathe again. They then set off for Tanga and early in the morning they arrived at a beach and the turtle carried the rat up the beach into the bush. Several men and women saw the turtle waddling towards the bush, but they did not see the rat, as he had jumped off and hid himself as soon as they entered the bush. The men and women rushed at the turtle and turned it over and held it down. The rat, seeing the plight of his friend the turtle, came out of his hiding place and picking up a brilliant red flower called *palambing*, stuck it into his anus. He then began to dance and sing in front of all the people.

Here is his song:

Sum, sum, sum
(Let go, let go, let go)
Kekfan kurundun
(Let this thing here)
Kulamil kulamil
(Go back, go back)
Ua:na tes, tes kasup)
(Into the sea, yes, the sea)
Kekfan, kurundun
(This thing here).

The people then left the turtle, except one man who was holding it down, to watch the antics of the dancing rat with the red flower sticking from his anus.

(During this part of the recital Tuangon picked up a bunch of red leaves, and sticking them between his legs, tried his best to imitate the song and dance of the rat, much to the amusement of his audience.)

The rat danced closer and closer to the turtle, until even the man who was holding it down got up and watched his performance. The rat then whispered to the turtle to turn over and make for the sea. The turtle did so and when the rat saw that he was safe he ran away

into the bush and hid. The people then discovered that the turtle had disappeared and they immediately went in search of the rat but they could not find it.

Pil Kasu Red.[3]

Tuangon then resumed his seat and the headman called on Funmatbau to tell them some of his Ni-a stories.

Ni-a is the chief character in a cycle of Tangan popular tales and Funmatbau was regarded as an expert in the interpretation of this particular cycle. The character Ni-a is, to the Tangan, the embodiment of everything ugly and unsociable. He is a fat, bow-legged, stooped old man, who is always stuffing food into his overdeveloped paunch and who gets about with the aid of an old broken spear. He has no teeth and speaks with a gruff lisp. The Ni-a stories are of two types, those which are told to women with but scant reference to sexual matters and those which are known to men and are full of humour dependent upon the sexual behaviour of the characters.

Since this was a gathering of men, Funmatbau launched out with the story of Ni-a and the Shell Ornaments.[4]

Ni-a shambled into a settlement empty of all people except five little boys who were playing on the dancing square. He asked them where all the men and women were and was told that they were all working in the gardens about a mile away. He then asked where they had hidden all their necklaces and arm rings and other ornaments. Four of the little boys feigned ignorance but the fifth, a little boy with sores around his mouth and between the cheeks of his behind came forward and with one hand in his mouth and the other scratching his bottom, said that they were hidden under the wood heap. (The reader can just imagine the roars of laughter which greeted Funmatbau as he acted the part of the small boy affected with yaws.)

Ni-a then went over to the wood heap, and finding the ornaments decorated himself with them and sang the following ditty:

Pilak na:k un turing. (Repeated *ad lib.*)

(The shell disks will come back. Don't worry.)

[3] Those readers who are sufficiently interested in the Tangan "popular tale" to wish to read others collected by the ethnographer are referred to an appendix to this article, where six others of a similar type will be recorded.

[4] The shell-ornament is called an *ampilak* and is a thin shell disk about four inches in diameter.

He then assured the little boys that he would only walk around for a short time and then return to the settlement and give them back the ornaments. He went off singing his song, and true to his promise returned in a little while and handed back the ornaments to the boys. The valuables were replaced in their hiding place but the women, on their return from the gardens, noticed that they had been disturbed. They asked the boys who had been touching their ornaments and they were told about the visit of Ni-a. The women then changed the hiding place.

The next day Ni-a came again and asked the same questions of the same five little boys and received the same answers. When the little boy suffering from yaws told Ni-a where the jewels were, the old man said: "You are a good little boy. You have a face just like mine." (Roars of laughter from the audience.) He decked himself out with the ornaments and went off, but did not return as on the previous day.

When the women returned from the gardens the little boys told them that Ni-a had stolen all their ornaments. The women then went to the place where Ni-a lived and began to dance before him in a most lascivious manner. They pushed to one side their *fung-fung*,[5] bent their knees and opened them and shut them, singing all the while the ditty which Ni-a sang when he stole the ornaments, with the addition of the phrase *la: li*, which, freely translated, means Hey, come on, hand them over!

Ni-a, being an old man, wore no pubic covering. He had made a small fire on the dancing square and was lying down beside it, watching the dance. As the line of women advanced towards him, Ni-a could not avoid being sexually aroused. At last he had an erection and out tumbled all the *ampilak* and other ornaments which he had stuffed beneath his foreskin. (Every action of Ni-a is mimicked at this stage. His pop-eyed look at the dancers—his holding down of his rising penis and his last scurried departure. The audience are so convulsed with laughter that several plead with Funmatbau to stop.)

If one goes to the island of Malendok, one may see there the erect penis of Ni-a, turned into stone. It is called *li n'am pilak*, or the cave of the *ampilak*. Rising from its floor there stands a huge stalagmite.

[5] A bunch of shredded leaves hanging from a girdle and covering the pubes.

As soon as Funmatbau had stopped laughing with the rest of those present, for even the narrator of these Ni-a stories cannot refrain from laughing at his own performance, he commenced to tell them a new one he had just received from a relative of his who had been visiting the neighbouring island of Feni. This story is typical of those told by and to the women and children and lacks the strong sexual savour of the last story. It is the tale of Ni-a and the Lobster.

Two small boys owned a pig in the form of a lobster. Every night they used to go down to the beach and feed their pig on cooked yam and sweet potato. They attracted the attention of the pig by calling out to it in a treble singing voice:

Suka, Suka, mel mel i da:n
O lobster, O lobster, stop in the water)
M'ere sup-sup i ya:i Suka
(When many men are looking for lobsters)

They also warned their pig not to come out if it heard old Ni-a calling it.

One night Ni-a saw the boys singing to their pig and after they had gone away he went down to the beach and sang the same song as the boys, with the intention of luring the lobster from the water and killing it. However, his voice sounded quite different from the boys, because he had no teeth, and the lobster would not show itself. (Funmatbau here imitated the old man singing in his gruff lisp, much to the amusement of his audience.)

Realizing that it was his lack of teeth which caused him to sing so differently from the boys, he returned to his house and got some pig's teeth out of an old jaw hanging there. He placed these teeth around his gums, and the next evening he saw the two boys come down, sing their song, feed their pig, and then depart. He approached the beach and immediately began to sing to the lobster. His voice sounded alright this time, and the lobster came out of the water. Ni-a speared it and took it back to his house.

The next night the two boys came down to the beach, and although they sang their song several times the lobster did not appear. They knew then that someone had captured it and immediately looked about for footprints. They found those of Ni-a and followed them

to his house. He was standing over the oven in which their lobster was cooking. They killed him and prepared him for the oven. Later on, they cooked and ate him in revenge for what he had done to their pig.[6]

Pil Kasu Red.

The sun had set by this, and those visitors who had some distance to avel packed up their baskets, called out to their womenfolk to hurry, and t out for home.

We must assume we are one of these parties making our way along a arrow foot-track through the thick jungle to our own family settlement, couple of miles away. As we pass along in single file, Nuba, the mother one of the men, commences to tell us a tale about Dafal.

Such a tale is one of a cycle in which *dafal*[7] is the principal character. excites keen interest among both men and women, but I suspect that iore stories belonging to this cycle are known to women than to men. *dafal* story almost always concerns the highly adventurous life of some pparently insignificant creature, sometimes a man and sometimes a bird. he success of the creature against overwhelming odds is invariably due to s possession of superior magical powers.

(To be continued.)

F. L. S. Bell.

PROCEEDINGS OF SOCIETIES:

NEW SOUTH WALES:

Applied Anthropology in the Trobriand Islands. *Summary of a lecture delivered before he Society by Mr. Leo Austen, Dip.Anthr., Resident Magistrate, Western Division of Papua, n 24th February,* 1941.

Mr. Austen dealt with the customs and organization of the natives in these areas, and referred in particular to chieftainship, mourning customs, trading, harvesting ritual and the ceremonial exchange of necklace and arm-shells.

There had been an introduction of Western sports, such as cricket, and of games, including draughts, in which, he said, the natives were greatly interested.

A welcome was extended to Mr. and Mrs. H. V. V. Noone, visitors to Australia from overseas. Mr. Noone has studied pre-history in France, Malaya and Australia.

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[6] Other stories in the Ni-a cycle will be recorded in an appendix to this article.

[7] A *dafal* is a young girl who has been confined in a bamboo cage as a ritual means of increasing her beauty and social prestige. See F. L. S. Bell, "Dafal," *J.P.S.*, Vol. 45, No. 3.

The People of Fiji and Their History. *Summary of a lecture delivered before the Society by Dr. A. Capell on 15th April,* 1941.

The lecturer began by outlining the history of the discovery of the Fiji Islands, and then discussed briefly their physical features. The islands are preponderantly volcanic, but a few in the far east of the group are limestone. Dealing with the social organization, he pointed out that a line of demarcation runs roughly north and south down the centre of Viti Levu, to the west of which line there existed an organization markedly different from that which exists to the east of it. The eastern type, under the influence of the government, is spreading in other districts also. In the valley of the Ndreketi River in Vanua Levu there still exists a matrilineal organization, but inheritance is coming to be reckoned patrilineally. The history of the group can to large extent be worked out through study of language, social organization, and in particular through native tradition, embodied in a series of *meke* or dance-songs, which tell of the coming of a race from overseas. The resultant picture shows a threefold grouping of immigrant peoples, (1) an early Melanesian type, the foundation of the population throughout Fiji, but largely swamped in the east by (2) a movement, probably Polynesian in origin, which may have come in about the thirteenth century and has gradually spread from a central point in north-east Viti Levu. (3) A Polynesian influence has come into the Lau Group from Tonga in the last two hundred years, and a similar Polynesian influence is found at work also in south-west Viti Levu. The peculiar group in central Vanua Levu does not seem to connect linguistically with those of western Viti Levu, and may be a separate and very early movement from Melanesia.

Ancient Crete. *Summary of a lecture delivered before the Society by Miss Denise Dettmann, M.A., on 10th June,* 1941.

The lecturer emphasized the fact that although excavation work in Crete dates only from the beginning of this century, the prehistoric remains which have been uncovered attest the development in the island during the Ægean Bronze Age of a culture at least equal in æsthetic and material achievement to the contemporary civilizations of Mesopotamia and Egypt.

Arthur Evans of the University of Oxford was the first investigator of any note to visit Crete. As a result of his work he established a chronological framework covering the archæological history of the island. There are three main periods, Early, Middle and Late Minoan, representing the main artistic phases in the pottery. Each main period is divided into three numbered phases: I, II and III, on the natural principle of its rise, maturity and decline. Early Minoan extends from 2400 B.C. to 2100 B.C., Middle Minoan from 2100 B.C. to 1580 B.C. and Late Minoan from 1580 B.C. to 1100 B.C.

Contact with Egyptian art is visible throughout the Cretan prehistoric age. Late Minoan architectural and ceramic painting was strongly influenced by Nilotic motives. More definite synchronisms are afforded by finds of foreign products on Cretan sites and of Minoan pottery in Egypt.

The most notable monuments are the palaces and the Palace of Knossos is the largest, best preserved and most thoroughly investigated. The general aspect of a Minoan palace is a vast conglomeration of buildings around a square courtyard, with certain regular details, but no general symmetry of design. There was sometimes a difference of several storeys

etween the ground floors in one building. Decorated pottery-ware is abundant in Crete. he Neolithic deposit at Knossos has been divided into lower, middle and upper strata. The wer pottery is plain dark-coloured ware, with a simple decorative pattern of zig-zags, erring-bones and rows of dots arranged in triangles. The Upper Neolithic pottery is better red, showing red or light brown surface with less elaborate ornamentation. It was in the iddle period that the best pottery was produced. The clay was worked to egg-shell fineness. Vaved rims and fluted bodies were copied from delicate metal cups and naturalistic designs ere painted on the surface.

The decoration of pottery was closely bound to the greater art of fresco-painting. Painted alls and floors were universal in Minoan houses. The lecturer exhibited a reproduction of a eritable masterpiece of landscape painting—a scene representing cats stalking pheasants etween rocks and flowers. Painting was also combined with modelling in relief.

Sculpture of large size is poorly represented but small works in steatite or ivory are omparatively numerous. The Minoans were workers in fine metals. Cups and vases earing the most beautiful *repoussé* designs are found as well as examples of dagger blades earing flat inlays of gold and other metal alloys.

A lesser kind of sculpture, seal-engraving, was practised extensively from the very earliest imes and developed to perfection in the Middle Minoan period. Indeed, most of our know-edge of Minoan ritual is derived from the elaborate designs carved on the precious stones used y the Cretans as seals.

The lecture was illustrated with a large number of slides and proved most interesting o an audience accustomed to hearing about the modern primitive civilizations of the Oceanic region.

SOUTH AUSTRALIA :

Members' Evening. *Summary of addresses delivered before the Society by Messrs. P. Hossfeld, N. B. Tindale, Dr. T. D. Campbell and Dr. Couper Black on 28th April,* 1941.

The President announced that the evening would be devoted to short addresses on xhibits, together with the usual discussions. He then called on Mr. P. Hossfeld to address he meeting.

Mr. Hossfeld, who had spent about six years in the Northern Territory, first exhibited a cylindro-conical stone which had been given to him by a buffalo hunter, who had found a ew in the Northern Territory at or near Annaburroo Station, east of the Adelaide River. This particular stone was made from igneous rock, apparently granite, and was found on a ilt plain. The water flow over this plain in the rainy season was a flat wide sheet, slow moving nd without a silt content sufficient to build up the plain, nor with sufficient power to move tones from place to place. The stone could reasonably have laid on the surface for many enturies.

The aborigines in the locality know nothing of the origin of these stones. The lecturer vas, however, more interested in the various tribes encountered in the Territory, and in the rea north of the Daly River he found the aborigines to be very well developed physically, aving plenty of game for food, but very untrustworthy. Within the area bounded roughly y Tanami, Tennant's Creek and The Granites, there was a fairly large number of aborigines,

and although the area was mostly spinifex country, there was sufficient food to support huma life. Although water was very scarce at times, the aborigines obtained sufficient in the dr seasons from the roots of the mallee trees.

There were no white settlements of any note within the area, apart from the few mine at The Granites, Tanami and Tennant's Creek, and large numbers of aborigines visit Th Granites, stay a day or two, and drift off. Mr. Hossfeld suggested that it would be advisab to study the sources of native food supplies and the aborigines themselves before any furth infiltration of white people took place, for portions within the area were gold-bearing an would, no doubt, be fairly well prospected before long.

Mr. Tindale stated in the discussion which followed that the finding of cylindro-conic stones in the area described by Mr. Hossfeld extends considerably the known distributio for these had previously only been found in definite areas in or about the Darling River Basi Two types of stone were fairly numerous. Those with incisions were usually found in th Darling Basin and in the areas south and west, and those without markings in the north an east.

Some of the stones have cupped bases and others flat; some have the cornute shap suggesting buffalo horns. The stones are usually found on the surface, but occasionally hav been found buried with human remains. They are evidently archæological in nature, an the significance of these stones has been entirely forgotten by the present generation o aborigines.

Mr. Tindale then exhibited several stone implements which had been found by Mi Noone near Morphett Vale in the Kunkar limestone formation beneath a more recent cam site.

These implements appeared to be of the same type as those of the Tartangan beds o the Murray River, whereas the surface implements were all Murundian.

As a second exhibit Mr. N. B. Tindale discussed the distribution of edge-ground axes i Australia, pointing out that they did not extend to the south-western third of the continen and that the reason for the absence of these implements was probably a functional one. H indicated that the principal use for the stone tomahawk was in the chipping out of nests o stingless bees (*Trigona*) from hollows in the trunks of trees. Another use was in the makin of bark canoes. The making of the smaller implements such as spears with the aid of th axe was a secondary use.

If the distribution in Australia of the stingless *Trigona* bees and the limits of the dis tribution of bark canoes in south-eastern Australia are plotted together on a map, the limit of their combined distribution are shown to correspond almost exactly with that of th edge-ground axe.

Since neither bees nor canoes were to be had in the deserts enclosing south-weste Australia, the idea of the axe never came to be adopted there and so there was a barrier to th spread of the new cultural item. In the extreme south-western part of Australia the native did use a form of axe, but this was made after an older tradition, from two pieces of flake stone of definite form, set in an opal ball of gum and mounted on a handle. This more ancien south-western type of axe bears witness to an earlier stage in the evolution of the axe. Th use of this older axe seems to have died out in many parts of Australia, in some places becaus it was no longer required, and in other places because it has been superseded by the newe

e-ground types. Stone flakes have been found as archæological remains on some old s in South Australia and appear to have belonged to flaked axes of the ancient type.

Mr. Hossfeld, Mr. Edquist, Prof. Cleland, Dr. Campbell and Mr. Stapleton participated an interesting discussion.

Mr. T. D. Campbell introduced the subject of the origin of the wheel.

The first means of transport was undoubtedly by humans, and later on the backs of mals. It was found that animals could drag more weight than they could carry and until ently the American Indians used the travois, and wheel-less carts were used in Ireland l Scotland until quite recently, sometimes with runners.

The wheeled cart probably originated from the roller which was used in antiquity to nsport monoliths, and from this was gradually evolved a cart mounted on a roller. Later, lighten the weight of the roller, the central portion was hollowed, leaving the bosses with larger diameter.

The discovery of the fixed axle was the most revolutionary idea and the roller type appeared. Probably the first wheels were cut from the section of tree trunks, although lloc disagreed with this on the grounds that a saw would be necessary to cut the trunk.

There is evidence that the Sumerians about 2500 B.C. knew of the wheel, and also the inese at about the same period—certainly before it was introduced into Egypt. It probably ginated when the nomadic types settled to agricultural pursuits. This led to the develop- nt of roads suitable for the types of wheel evolved. The further study of Sumerian or iatic remains might throw some light on this vexed question.

The wheel was unknown to the Australian aborigine, the only rotating motion used being it of the bobbin used in spinning hair string, the revolving fire drill, and the flight of the omerang.

In the subsequent discussion, Mr. Edquist stated that the ball was common enough in ture, and suggested that balls on axles may have been used before the wheel.

Mr. Hossfeld suggested that a flat wood disc or stone with a hole in it, through which a ck had been passed and trundled along, may have given early man the idea for wheels on axle, for the discovery of the use of the fixed axle was most momentous.

Rev. N. H. Louwyck and Mr. Stapleton also took part in the discussion.

Dr. E. Couper Black exhibited recent photographs of the Devon Downs shelter on the ver Murray. These photographs showed sand banking high on the front of the shelter, nich would gradually be engulfed by the drift.

This drift was caused by the clearing of the land on the plateau about a year or two after e excavation by Hale and Tindale, which started the systematic study of archæology in ustralia.

Dr. Black also exhibited several aboriginal human bone specimens which had been otained from the Coorong, showing the prevalence of boomerang legs. These were probably or 80 years old and approximately 10% of the skeletal remains examined in the burial ound were affected with boomerang legs.

In the discussion led by Prof. J. B. Cleland and Mr. Edquist various theories were debated to the cause of this malformation.

The Environment and Ecology of the Aborigine. *Summary of a statement delivered before the Society by Prof. J. B. Cleland on 26th May,* 1941.

Professor J. B. Cleland read the Introductory Remarks which were intended to be included in the Anthropological Section of the British Science Guild Handbook on which a committee was working. He then proceeded with the First Section dealing with " Environment and Ecology of the Native."

He requested members to take notes of any debatable matter and said that he would welcome criticism and correction. The paper was admirably presented, and Professor Cleland was highly complimented on the excellent manner in which this Section had been compiled.

The 1940 Expedition to Central Australia. *Summary of a lecture delivered before the Society by Mr. C. P. Mountford on 30th June,* 1941.

Mr. Mountford stated that the primary object of the expedition was to study the Art and Legend of the Aborigine. The party consisted of Mr. and Mrs. C. P. Mountford and Mr. L. Sheard, but Mrs. Mountford did not go beyond Ernabella.

After spending some days at Ernabella, Messrs. Mountford and Sheard proceeded on camels to Mount Connor, Ayers Rock and Mount Olga.

The lecturer briefly described various incidents on the journey and projected cinema pictures depicting various phases of aboriginal activity in the preparation of spinifex gum, the manufacture of a spear-thrower, and the preparation of bread from the fig fruit.

Another film showed natives smoking out small marsupials from a burrow, sand drawing, and children at play.

The final film was a magnificent production in colour photography illustrating various activities in aboriginal life such as the preparation of food, body adornment, together with various scenes *en route* to Ayers Rock and Mount Olga.

A large number of crayon drawings on paper were on exhibition and also still photographs of aborigines, and some of the beautiful trees in the interior.

The Physical Characteristics of the Aborigine. *Summary of a statement delivered before the Society by Dr. T. D. Campbell on 28th July,* 1941.

Dr. T. D. Campbell presented portion of a paper prepared for the British Science Guild Handbook dealing with the physical characteristics of the Australian aborigine. Dr. Campbell had collected excellent material for this subject, which was freely discussed following the reading of this paper.

Museum Evening. *Summary of lectures delivered before the Society by the Rev. N. H. Louwyck, Mr. N. B. Tindale and Mr. C. P. Mountford on 28th August,* 1941.

The President welcomed members in the Department of Egyptology, where Rev. N. H. Louwyck and Mr. N. B. Tindale briefly described the exhibits displayed in this department of the Museum. An inspection was then made of the specimen cases containing models of skulls. Mr. Tindale outlined the characteristics of various types, including Aitape, Tartangan and Cohuna.

A visit to the aborigine stone implement section followed. Mr. Tindale, commenting on the various types in the collection, segregated them into groups including Kartan, Tar-

angan, Mudukian, Murrandian, Gamberian and some aborigine prehistoric types and native xes.

Mr. C. P. Mountford's talk on Central Australian aborigine *churingas* was illustrated with ome excellent epidiascope pictures of *churingas* representing the honey ant, snake and spider, ogether with various impressions of natives sitting around camps.

The President advised members that an interesting exhibit of stone implements prepared y Mr. H. M. Cooper would be inspected on the way to the basement. Mr. Cooper had romised to describe the collection at some future meeting.

An excellent supper was prepared by Mr. E. Vogelsang, a member of the Society on the taff of the S.A. Museum.

VICTORIA :

Annual Meeting of the Anthropological Society of Victoria, 1940. *Summary of the proceedings of the annual meeting of the Society, 2nd October,* 1940.

The annual meeting of the Society was held at the Anatomy Lecture Theatre, University of Melbourne, on 2nd October, 1940. The following office-bearers were elected for the year 1940-41 : President, Mr. S. R. Mitchell ; Vice-Presidents, Messrs. D. A. Casey and H. R. Balfour ; Hon. Secretary and Treasurer, Mr. F. R. Mitchell ; Hon. Auditor, Mr. A. C. Frostick ; Committee, Messrs. Lodewyckx, Smith, Hyam, Croll, Kenyon, Mahony and Wishart.

The annual report and balance sheet were deferred and subsequently adopted at the December meeting.

Mr. H. R. Balfour exhibited an instructive set of coloured films taken by him on a recent trip through Northern India.

Rock Carvings of the Sydney and Hawkesbury River Districts. *Summary of a lecture by Mr. C. C. Towle delivered before the Society by Mr. A. S. Kenyon,* 1940.

Mr. Kenyon read a paper written by Mr. C. C. Towle, Sydney, entitled " Rock Carvings of the Sydney and Hawkesbury River Districts ", also " Rock Carvings at Upalinna, Flinders Range, South Australia ", by Mr. M. F. Leask. Mr. Kenyon also described the discovery of a new group of paintings in north-eastern Victoria about four miles north-west of the Derbyshire railway station on the Koetong Creek. These consisted of about seven distinct conventionalized human figures, several indistinct ones, and one animal representation of probably a wallaby. Mr. Kenyon's comments largely helped in making a very instructive and interesting evening.

Some Ethnological Observations in Queensland. *Summary of a lecture delivered before the Society by the President, Mr. S. R. Mitchell, on the 19th March,* 1941.

The Auckland National Park in the Carnarvon Range, Queensland, was described, particular reference being made to the geology of the area, and the remarkable examples of aboriginal pictorial relics on the walls of several large rock shelters. These consisted of stencilled hands, feet, boomerangs and other objects, and an interesting criss-cross design painted in various colours which is conjectured to be a totemic representation of the seed

cone of the Macrozamia palm. The gathering of these seeds, together with tribal ceremonies, were probably the reasons for the presence of the natives in these rugged gorges. A recent trip to the Cape York Peninsula was also described and illustrated with a fine series of photographs.

Members' Evening, Hawthorn Free Library. *Summary of the proceedings of an informal meeting held on the 16th July, 1941.*

An informal meeting of the Society was called on Wednesday, 16th July, 1941, at the Hawthorn Free Library, to inspect a fairly comprehensive exhibition of Australian aboriginal stone and wooden implements and utensils together with objects from New Guinea and the Solomon Islands. This exhibition was arranged by three members of the Society, viz. Mr. S. R. Mitchell, Mr. F. Smith and Dr. Wishart, and created a lot of interest, particularly among the children. There was an attendance of approximately 3,500 adults and children.

Annual Meeting of the Anthropological Society of Victoria, 1941. *Summary of the proceedings of the annual meeting of the Society, 8th October, 1941.*

The annual meeting of the Society was held at the residence of Dr. Frank Tate, 54 Harp Road, East Kew, on 8th October, 1941. The annual report and balance sheet of the Society were read and adopted. There being no nominations for office-bearers, for the ensuing year, it was moved and seconded that the present officers be re-elected without change, viz., President, Mr. S. R. Mitchell; Vice-Presidents, Messrs. D. A. Casey and H. R. Balfour; Hon. Secretary and Treasurer, Mr. F. R. Mitchell; Hon. Auditor, Mr. A. C. Frostick; Committee, Messrs. Lodewyckx, Wishart, Smith, Hyam, Croll, Kenyon and Mahony.

The Society then viewed an exhibition of Dr. Frank Tate's film, " The Land of Wait-a-While ", being a series of coloured pictures taken on his visit to the Elsey Station, Roper River.

REVIEWS

The Passing of the Aborigines. *By Daisy Bates, C.B.E., xviii, 258. John Murray, London, 1938.*

Against the background of an Aboriginal Australia, not so very different from that of to-day, Mrs. Bates has painted a vivid picture of a lifetime spent among the natives. This book is an autobiography of a rare soul. After reading it, I feel that Mr. Arthur Mee has not exaggerated when he describes her as " the last friend of the last remnant of this dying race ". It *is* true that she "knows them as they know themselves. She knows their languages, their rituals, their traditions, their capacities and their incapacities as no white man or woman on the earth knows them."

The book is not and does not pretend to be a comprehensive scientific treatise upon the manners and customs of the Aborigines. However, it is overflowing with valuable information which simply cannot be neglected by any student who seriously wishes to understand the Aborigines.

Without sentimentality and without undue exaggeration, Mrs. Bates shows us how

nevitable is the passing of this native race ; our present attitude towards it is not ummarily altered. In her own words " the ustralian native can withstand all the everses of nature, fiendish droughts and weeping floods, horrors of thirst and nforced starvation—but he cannot with- tand civilization." The writer of this eview has always been opposed to any riend of the Aborigine taking such a defeatist ttitude towards the problem of his survival. However, he would be a stout man who ould read this book and then say that there s a certain, hopeful solution. Mrs. Bates uggests that the best and only policy is the vholly negative one of doing nothing to nterfere with the rhythm of native life. She has no positive remedies for the rehabili- ation of the native except the appointment of a Native Commissioner whose sole job would seem to be the protection of the native against contact with all forms of our civilization.

The volume is packed with first class reporting. Incident follows story and theory gives way all along the line to first hand evidence of a strictly concrete nature. Humour and sadness co-mingle, but interest never slackens. I feel sure that it will be a long time before the publisher, Mr. John Murray, will be able to offer his readers another volume on the same subject of equal merit.

F. L. S. BELL.

A Comparison of the Prehistory of Australia with that of Indo-China, the Malay Peninsula and the Netherlands East Indies. *By F. D. McCarthy, Dip.Anthr.* 11 *plates, pp.* 30-50. *Singapore,* 1938.

This paper was delivered before the Third Congress of Prehistorians of the Far East by a practising archæologist with an intimate knowledge of both the Malayan and Australian fields. It represents the results of an intensive research into the known culture traits of both regions.

The stone industry associated with the prehistoric Hoabinhien civilizations of Further India and Indonesia has three distinct forms which are known as Hoabinhien I, Hoabinhien II, and Hoabinhien III. After examining the palæolithic evidence provided in Australia by the flint coup-de-poing found in the Portland-Mt. Gambier region of south-east Australia, the author suggests that this industry forms one of the oldest in Australia. It may belong to the Hoabinhien complex or it may be prior to this complex. Indeed, an examination of the Chellean-type industry of Java reveals that several of the implement types, apart from those found in the Portland-Mt. Gambier region, also occur in south-east Australia.

Flake industries of great variety and abundance occur throughout Australia, but few such industries are recorded from the Malay Peninsula and Archipelago. This strange fact may be due to a lack of suitable stone in the latter region.

Perhaps the best evidence of an archæological link between the continent and Indonesia is provided by the many artifacts found in Australia which are of a definitely Hoabinhien type. Mr. McCarthy shows that all of the varieties of chipped pebble and cone implements characteristic of the Malayan and Indo-China industries are found in south-east Australia. However, he is careful to point out that there are many rich flake cultures found throughout Australia which have no relationship to the Hoabinhien industries.

The author distinguishes four varieties of " points " and after defining their distribution concludes that the *pirri* and the serrated

" point " are both related to similar forms found in the Celebes. With regard to the round-axe and the hammer-dressing technique used in its production, there is some doubt as to whether it was brought to the continent by the Australians before the arrival of the Papuans and Melanesians in New Guinea or whether it diffused into Australia via Cape York after the coming of the Papuans and Melanesians.

Mr. McCarthy also makes the very interesting suggestion that a highly probable link with the Bronze Age art of Indonesia is supplied by the designs incised on the stone and wooden *tjurunga* of central and north-west Australia.

The whole paper is carefully written and well illustrated and must repay the earnest attention of any student of Oceanic archæology.

F. L. S. BELL.

By Their Works. *By H. Phelps Clawson, Curator of Anthropology, Buffalo Museum of Science.* 260 *pages,* 107 *plates. Price* 4 *dollars. Buffalo,* 1941.

This handbook describes the history and culture of the various peoples represented in the archæological and ethnological collections of the Buffalo Museum of Science. Its publication was made possible through a grant by the Rockefeller Foundation. It is written in condensed style, and forms a handy reference work for lecturers, teachers and students; it describes a period of 25,000 years of human history of great interest to the general reader. A résumé is given of the Old Stone Age, Transition Period, New Stone Age, Early Metal Age, Early Egy prehistoric Asia, Greece during the Geomet Age, and the Americas. There are chapt on Chinese jades, Luristan, Ordos and Sy Hittite bronzes and terra-cottas. In additi five chapters are devoted to the livi native peoples of Africa, Indonesia, Melanes Polynesia, Australia and the Americas.

The Buffalo Museum is to be congratula not only on the excellent make-up of t book, but also for the wise and logi manner in which it has built up its collecti with the aim of presenting to the citiz of Buffalo, and to other visitors to galleries, a composite picture of the hist of the world as revealed by the archæolog and anthropologist. It might be mentio that the Buffalo Museum acquired the w known P. G. Black collection of 6,(curios from Melanesia, which was in Austra for many years.

The author is an archæologist who worl in Egypt and the Sudan from 1927 to 1(with the Harvard-Boston Expedition. A result, the chapters on the classical civili tions are the most comprehensive. T section on Oceania is adequate, but that Australia is the most meagre of all, proba because of the scanty material in this p of the Museum's collection. The illustrati reveal that the underlying aim of the displ and of the book, has been to present a br comparison of primitive art, and it is ind a fortunate institution in being able cover so much of the story with its (exhibits, many of which are muse treasures.

F. D. McCARTHY